

Abstract

The present invention relates to monocotyledon plant cells and plants which are genetically modified, wherein the genetic modification consists of the introduction of an extraneous nucleic acid molecule which codes for a protein with the biological activity of an R1 protein. The present invention further relates to means and methods for the production thereof. Plant cells and plants of this type synthesise a modified starch, which is characterised in that it has an increased phosphate content and/or a modified phosphorylation pattern and/or an increased final viscosity in an RVA profile and/or a reduced peak temperature in DSC analysis and/or an increased gel strength in the texture analysis compared with starch from corresponding non-genetically modified monocotyledon plants. Therefore, the present invention also relates to the starch which is synthesised from the plant cells and plants according to the invention, and to methods of producing said starch. The present invention further relates to wheat flours which contain said modified starches, and to food products and bakery products which contain said wheat flours and/or starch.